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PATENT DEPARTMENT - 53051
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EXAMINER	
MYINT, DENNIS Y	

ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/741,303	WEISSMAN ET AL.	
	Examiner	Art Unit	
	Dennis Myint	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 September 2006*.

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12/18/2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *09/11/2006*. 8806
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to Applicant's Amendment, filed on 05 September 2006.

2. Claims 1-34 are pending in this application. Claims 1, 15, and 30 and 46 are independent claims. In the Amendment filed on 05 September 2006, claims 1, 5-7, 15, and 19-21 were amended. Claims 29-34 were newly added. This office action is made final.

Response to Arguments

3. The applicant's arguments filed on 05 September 2006have been fully considered but are moot in view of the new ground(s) of rejection.

Applicant made arguments based on the amendments that *Wood does not disclose defining a target definition comprising a concept for detecting target hits in an article as claimed in the present invention (*Applicant's argument, Page 10).

In response, new ground(s) of rejection are introduced referring to Maruyama et al., (U.S. Patent Number 6685475), which discloses a target definition table comprising a plurality of concepts.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 1-4, 12, 13, 15-18, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woods (hereinafter "Woods") (U.S. Patent Number 5724571) in view of Maruyama et al. (hereinafter "Maruyama") (U.S. Patent Number 6685475).

As per claim 1, Woods is directed to a method and teaches the limitations:

"defining target rules for detection of target hits in an article, comprising defining target article region" (Column 4 Lines 47-38, i.e., *windows onto a target document – i.e., regions in a document* and Column 5 Lines 7-14);

"defining extraction rules based on the target rules for the extraction of extracts from the article, comprising an extraction article region" (Column 5 Line 66 through Column 7 Line 57, i.e. *Basic Method: Ranking and Penalty Procedures, Procedure 1, Procedure 2, Procedure 2, Procedure 3, Procedure 4, Procedure 5, Procedure 6, Procedure 7, Procedure 8, Procedure 9*, and so on.);

"applying target rules to each target article region of the article to determine target hits" (Column 4 Lines 47-38, i.e., *windows onto a target document – i.e., regions in a document* and Column 5 Lines 7-14); and

"applying extraction rules to detect at least one extract from the article based on at least one determined target hit" (Woods, Column 5 Line 66 through Column 7 Line 57).

Woods dose not explicitly teach the limitation: "a target definition comprising at least one concept".

Maruyama teaches the limitation:

"a target definition comprising at least one concept" (Figure 18 and Figure 20; Column 11 Lines 43-53, i.e., *every anchor name in an anchor table (B) which is linked from the page table (A) is added to a* ***target definition*** *table shown in Fig. 20, because each* ***concept*** *of each term described in a dictionary or a glossary is considered to be generally a concept which a provider of the material wants the user to learn*).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the skill to add the feature of using target definition, which comprise concepts, as taught by Maruyama to the method of Woods, which extract documents, so that the resultant method would comprise a target definition which comprises at least one concept. One would have been motivated to do so in order to simply narrow down the scope of interest to defined targets (Maruyama, column 3 Lines 24-34, i.e., *the target definition file 80)* and also because target definition is well known in the art of document extraction.

As per claim 2, Woods teaches the limitation:

" wherein a plurality of target hits are detected and a plurality of extracts are extracted" (Column 4, Lines 38-47).

As per claim 3, Woods is directed to the limitation:

"further comprising sorting the extracts based on the extraction rules" (Column 5 Line 66 through Column 7 Line 57).

As per claim 4, Woods discloses the limitation:

"further comprising extracting at least one extract from the article based on the determined target hit" (Column 5 Line 66 through Column 7 Line 57).

Claims 15-18 are rejected on the same basis as claims 1-4 respectively.

As per claim 12, Woods teaches the limitation:

"wherein the target article region is an article, a sentence or a term" (Column 4 Lines 48-62 and Column 7 Lines 13-25).

Claim 26 is rejected on the same basis as claim 12.

As per claim 13, Woods teaches the limitation:

"wherein the extraction article region is a article, a sentence or a term" (Column 4 Lines 48-62 and Column 7 Lines 13-25).

Claim 27 is rejected on the same basis as claim 13.

6. Claim 5, 6, 19, 20, 30, 31, are rejected under 35 U.S.C. 103(a) as being unpatentable over Woods in view of Maruyama and further in view of Talib et al. (hereinafter "Talib") (U.S. Patent Application Publication Number 2001/0049674).

Referring claims 5, Woods in view of Maruyama does not explicitly teach the limitation: "wherein the target rules further comprise a target score formula".

Talib teaches the limitation: "wherein the target rules further comprise a target score formula" (Paragraphs 0170-0171).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of employing a target score formula as taught by Talib to the method of Woods in view of Maruyama so that, in the resultant method,

the target rules would further comprise a target definition and a target score formula. One would have been motivated to do so in order to *provide users with a multiple-taxonomy, multiple category search engine that allows users to search for records* (Talib, Paragraph 0043).

Referring to claim 6, Talib teaches the limitation:

"wherein applying the target rules comprises, using the target score formula to detect target hits" (Talib, Paragraph 0043).

Claims 19 and 20 are rejected on the same basis as claims 5 and 6 respectively.

As per claim 30, Woods in view of Maruyama teaches the limitations:

"defining target rules for detection of target hits in an article, comprising defining a target article region, a comparison method, and a target definition comprising at least one of a concept, a concept set, or a gist" (Woods, Column 4 Lines 47-38, i.e., *windows onto a target document – i.e., regions in a document* and Column 5 Lines 7-14; Maruyama, Figure 18 and Figure 20; Column 11 Lines 43-53, i.e., *every anchor name in an anchor table (B) which is linked from the page table (A) is added to a* ***target definition*** *table shown in Fig. 20, because each* ***concept*** *of each term described in a dictionary or a glossary is considered to be generally a concept which a provider of the material wants the user to learn*); Note that comparison method is in inherent in both Woods and Murayama;

"defining extraction rules for the extract/on of extracts from the article, comprising defining an extraction article region and at least one target rule to which the extraction rules relate" (Woods, Column 5 Line 66 through Column 7 Line 57, i.e. *Basic Method: Ranking and Penalty Procedures, Procedure 1, Procedure 2, Procedure 2, Procedure 3, Procedure 4, Procedure 5, Procedure 6, Procedure 7, Procedure 8, Procedure 9*, and so on.);

Woods in view of Talib teaches the limitation:

"applying target rules to each target article region of the article to determine a target score for each target article region" (Woods, Column 5 Line 66 through Column 7 Line 57; Talib, Paragraph 0043); and

"applying extraction rules, to detect at least one extract associated with at least one target article region from the article based at least in part on the target score for the at least one target article region" (Woods, Column 5 Line 66 through Column 7 Line 57; Talib, Paragraph 0043).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the teaches of Woods, Maruyama, and Talib into a combined method so that said combined method would define target rules for detection of target hits in an article, comprising defining a target article region, a comparison method, and a target definition comprising m least one of a concept, a concept set, or a gist, define extraction roles for the extract/on of extracts from the article, comprising defining an extraction article region and at least one target rule to which the extraction rules relate, apply target rules to each target article region of the

article to determine a target score for each target article region, and apply extraction rules, to detect at least one extract associated with at least one target article region from the article based at least in part on the target score for the at least one target article region. One would have been motivated to do so to simply narrow down the scope of interest to defined targets (Maruyama, column 3 Lines 24-34, i.e., *the target definition file 80)* and also because target definition is well known in the art of document extraction.

As per claim 31, Woods teaches the limitation:

"determining a plurality of extracts based on the extraction rules;

ranking the extracts; and outputting the extracts" (Abstract, i.e., *ranking ports of text that may contain information sought*).

7. Claim 7 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woods in view of Maruyama and further in view of Fernley et al. (hereinafter "Fernley")(U.S. Patent Application Publication Number 2002/0174101).

Referring to claim 7, Woods in view of Maruyama teaches the limitation "the target definition comprises a concept set" (Woods, Column 5 Lines 7-51). Woods in view of Maruyama does not explicitly disclose the limitation: "a gist."

Fernley teaches the limitation "a gist" (Paragraph 101).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of generating a gist of a document as taught by

Fernley to the method of Woods in view of Talib so that, in the resultant method, the target definition comprises a concept set or a gist or both. One would have been motivated to do so in order to *provide a sufficiently specific method of document retrieval, particularly when applied to a set of large documents with broad semantic content* (Fernley, Paragraph 0012).

Claim 21 is rejected on the same basis as claim 7.

8. Claim 8-11, 14, 22-25, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woods in view of Maruyama and further in view of Fernley and further in view of Sacco (hereinafter "Sacco") (U.S. Patent Number 6763349).

Referring to claim 8, Woods in view of Maruyama and further in view of Fenley does not explicitly disclose the limitation: "Wherein the concept set is a list of concepts."

Sacco teaches the limitation: "Wherein the concept set is a list of concepts" (Sacco Column 8, Lines 15-24).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of using sets of concepts to the method of Woods in view of Talib and further in view of Fernley so that, in the resultant method, the concepts set is a list of concepts. One would have been motivated to do so in order to obtain *reduced taxonomy, which derived from the original taxonomy by pruning the concepts* (Sacco, Column 2 Lines 5-8).

Referring to claim 9, Sacco teaches the limitation:

"wherein concepts in the list of concepts are produced by set operations on multiple lists of concepts" (Column 2 Lines 5-8 and Column 8, Lines 15 through Column 3 Line 32).

Referring to claim 10, Fernley teaches the limitation:

"wherein a gist comprises weighted concepts" (Paragraphs 0100-0104).

Referring to claim 11, Fernley is directed to the limitation:

"wherein the gist is user defined or is a calculated gist of the article" (Paragraphs 0100-0104 and Paragraph 0011). Note that in neural network learning rules, user feedback/input is always present.

Claims 22-25 are rejected on the same basis as claims 8-11 respectively.

Referring to claim 14, Fernley is directed to the limitation:

"wherein the article is preprocessed to determine concepts contained in the article and a gist for the article" (Paragraphs 0100-0104 and Paragraph 0011).

Claim 28 is rejected on the same basis as claim 14.

9. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woods in view of Maruyama and further in view of Ukrainczyk et al. (hereinafter Ukrainczyk) (U.S. Patent Application Publication Number 2002/0022956).

As per claim 29, Woods in view of Maruyama does not explicitly teach the limitation: "wherein the concept is defined by a group of related words, relationships with other concepts, the strength of the relationships, and statistics about the concept usage in language".

Ukrainczyk teaches the limitation:

"wherein the concept is defined by a group of related words, relationships with other concepts, the strength of the relationships, and statistics about the concept usage in language" (Paragraphs 0030, i.e., *The matrix values are attributes of the relationship between features and concepts, including feature frequency data determined by calculating the number of times the feature occurred in documents tagged to that concept node (count), and assigning a value representative of the strength of association between the feature and the concept (weight)*). Note that said features are also concepts.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of employing a group of related words, relationships with other concepts, the strength of the relationships, and statistics about the concept usage in language, as taught by Ukrainczyk in the art of document extraction and classification, to the method of Woods in view of Maruyama so that in the resultant method the concept will be defined by a group of related words, relationships

with other concepts, the strength of the relationships, and statistics about the concept usage in language. One would have been motivated to do so in order to provide *an effective method for classifying text* using *a statistical model* and also because frequency of terms, relationship among/between terms and strength of said relationships are commonly used in the art of document classification, document extraction and document clustering.

10. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woods in view of Maruyama and further in view of Talib and further in view of Fernley et al. (hereinafter "Fernley")(U.S. Patent Application Publication Number 2002/0174101).

As per claim 32, Woods in view of Maruyama further in view of Talib does not explicitly teach the limitation: "wherein the gist is a vector of weighted concepts".

Fernley teaches the limitation:

"wherein the gist is a vector of weighted concepts" (Paragraph 0007, i.e., *a vector of terms with associated weights;* and Paragraph 0101, i.e., *It is believed that this method provides for each document, an indication of the major concepts or 'gist' of its contents*).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of generating a gist (vector of terms) of a document as taught by Fernley to the method of Woods in view of Maruyama and further in view of Talib so that, in the resultant method, the target definition comprises a

concept set or a gist or both. One would have been motivated to do so in order to *provide a sufficiently specific method of document retrieval, particularly when applied to a set of large documents with broad semantic content* (Fernley, Paragraph 0012).

11. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woods in view of Maruyama and further in view of Talib and further in view of Ukrainczyk et al. (hereinafter Ukrainczyk) (U.S. Patent Application Publication Number 2002/0022956).

As per claim 29, Woods in view of Maruyama and further in view of Talib does not explicitly teach the limitation: "wherein the concept is defined by a group of related words, relationships with other concepts, the strength of the relationships, and statistics about the concept usage in language".

Ukrainczyk teaches the limitation:

"wherein the concept is defined by a group of related words, relationships with other concepts, the strength of the relationships, and statistics about the concept usage in language" (Paragraphs 0030, i.e., *The matrix values are attributes of the relationship between features and concepts, including feature frequency data determined by calculating the number of times the feature occurred in documents tagged to that concept node (count), and assigning a value representative of the strength of association between the feature and the concept (weight)*). Note that said features are also concepts.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of employing a group of related words,

relationships with other concepts, the strength of the relationships, and statistics about the concept usage in language, as taught by Ukrainczyk in the art of document extraction and classification, to the method of Woods in view of Maruyama and further in view of Talib so that in the resultant method the concept will be defined by a group of related words, relationships with other concepts, the strength of the relationships, and statistics about the concept usage in language. One would have been motivated to do so in order to provide *an effective method for classifying text* using *a statistical model* and also because frequency of terms, relationship among/between terms and strength of said relationships are commonly used in the art of document classification, document extraction and document clustering.

12. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woods in view of Maruyama and further in view of Talib and further in view of Takada et al. (hereinafter Takada) (U.S. Patent Number 5796913).

As per claim 34, Woods in view of Maruyama and further in view of Talib inherently teaches comparison methods. However, Woods in view of Maruyama and further in view of Talib dose not explicitly disclose the limitation: "wherein the comparison method is one of an associated categorization-like method, an inverse categorization-like method, a similarity to gist method, or a concept set hit method".

Takada teaches the limitation:

"wherein the comparison method is one of an associated categorization-like method, an inverse categorization-like method, a similarity to gist method, or a concept

set hit method" (Column 6 Line 59 through Column 7 Line 9, i.e., *The plural chapters are classified into several image genres corresponding to several content or* ***gist****, into which a plurality of karaoke songs are* ***categorized.*** *For example, the plural chapters are classified into image genre appropriate for songs with summer seasonal theme, image genre appropriate for songs with winter seasonal theme, and image genre appropriate for songs with spring or fall seasonal theme*).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of employing gist in categorization, which will be used for searching, as taught by Takada to the method of Woods in view of Maruyama and further in view of Talib so that the resultant method would comprise a comparison associated categorization-like method. One would have been motivated to do so because comparison methods, which compare based on categorization or categories, are well known in the art.

Conclusion

13. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Myint whose telephone number is (571) 272-5629. The examiner can normally be reached on 8:30 AM - 5:30 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-5629.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dennis Myint AU-2162

Cam Y Truong
primary Examiner
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